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THE UNIVERSAL ENEMY

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THE UNIVERSAL ENEMY

So far as public attention is concerned, syphilis heretofore has been ignored, treated contemptuously. But now, due to widespread education about the disease, public indifference has changed to intense desire for action. And action can be provided, for measures by which syphilis can be checked have been developed.

Basic factor in such measures is treatment. Since 1918 there has been in existance a State-wide system of public clinics for the treatment of syphilis. This system has been greatly expanded, so that now, with most areas of the State covered, the problem of providing proper treatment is well on the road to solution.

Steps have been taken to provide for co-operation with the private physicians of the State. Means of prompt diagnosis have been placed at their disposal, as well as drugs needed for indigent patients.

As part of the program, the State now has a corps of nurses for special contact work among the patients who fail to receive the necessary amount of treatment from private physicians.

Final action to forge an unbreakable chain about syphilis has been taken by the Advisory Board of the Pennsylvania Health Department. The Board has made early syphilis-that is, syphilis that is mainly responsible for its spread

reportable throughout the State. The report is by number only. But should the patient with early syphilis, who is a contagious carrier, neglect to continue treatments, then the name is reported. An investigator visits the patient and urges that treatment be continued.

The average citizen may wonder why such an intensive campaign has been planned. The answer is that at last medical science has developed methods of treatment through which a long-sought goal has been reached.

That goal is the cure of syphilis.

Funds for the campaign have been made available to Pennsylvania and other States through a Federal Act. Combined with State funds, they are being expended in a fight to the finish.

Greatest hope for success of this nation-wide program is found in the fact that an aroused public opinion is behind it. As the public learns that syphilis can be controlled, that the damage done by it can be averted, an evergrowing demand for this control has developed.

Syphilis is being attacked in Pennsylvania along time-tried public health lines. In public health work, the vital procedure is to get at the source of the contagion, to choke off the spread of an infection. That is why, in the case of typhoid fever, for example, careful examination is made for carriers of the germ. "Where did it come from?"

is the question which must be answered first.

Syphilis fits readily into any public health campaign because these same public health procedures can be applied to it. It is an infection, just as is a cold or typhoid fever. It is even easier to label than a cold, however, for syphilis is caused by only one type of germ. Many germs are blamed for the common cold. And there are specific tests for syphilis, tests which point unerringly to it.

This situation would be valueless, so far as eradication of syphilis is concerned, if medical science were forced to stop with identification of the carrier of syphilis.

At this point, modern treatment methods dovetail neatly into the campaign against syphilis. For any person in the carrier stage of the infection -- with open sores upon the body--quickly leaves the carrier class by obtaining the necessary treatment. And by the same action the patient is started upon the road to cure of the disease.

Since the cure of syphilis has become attainable, it now is necessary to improve detection of the infection at the earliest possible stage of the invasion.

The public can be of great assistance in this. Laymen cannot be expected to become diagnosticians of the disease, but at the same time they should be more alert to the possibil-

ity of its presence and the need of seeking medical advice.

The reason this watchfulness is necessary is because the infection of syphilis does not begin with dramatic or devastating symptoms.

Also, it moves deliberately, which adds to the difficulty of diagnosis. For instance, the first sign of its invasion does not appear usually until two or three weeks, sometimes longer, after the infection has taken place. By the time this first sign, the so-called initial lesion or primary sore, appears, the germs of syphilis are distributed through the body. Local treatment, that is treatment of the sore, is of no value whatsoever, so far as cure of the infection is concerned.

The important thing to realize is that the time when the primary sore appears, even before the various blood tests for syphilis are positive, is the most vital time at which to start treatment. The germs have not become entrenched within the body, and are more easily destroyed by proper treatment.

What is the primary sore? As has been said, laymen cannot be expected to make the final decision on any given lesion. But laymen must give physicians the opportunity to see any suspicious, slow-healing sore--and avoid self-treatment.

The initial sore of syphilis, appearing long after

infection has occurred, starts as a small, painless elevation in the skin at the point of inoculation. This may be on any part of the body.

Another reason why treatment is an urgent matter has already been given. It is the fact that if a patient in the early stages of the disease, with the primary sore still present, receives treatment, he no longer is a public health menace. The germs of syphilis, which normally are swarming in such sores, quickly disappear when treatment is started.

That means the patient cannot transmit the infection to others. However, this is true only if regular treatment is received.

Quarantine of infected persons is not necessary, so long as they are treated properly. The patient can pursue normal activities, not altering in the least the daily routine --if proper treatment is taken.

The blood test for syphilis is not positive immediately upon appearance of the sore. That is why it is important to get an accurate diagnosis of the lesion--"The darkfield."

Hope of curing syphilis is inversely proportionate to duration of the disease. That is, the longer the infection has been harbored, the less chance there is of effecting a cure.

Vital time is wasted too often by the patient who is content to treat himself when the primary sore appears. No layman can be expected to know when a sore is syphilitic in origin. A physician is the only one capable of determining that.

Even after the primary lesion of syphilis has come and gone, it is not too late for curative treatment. While the ideal time for treatment is as early as possible in the infection, even in the so-called secondary stage of the disease, there still is a reasonable chance of halting the invasion. It may require longer treatment, but it is by no means a time to give up hope.

Secondary symptoms of syphilis are, like the primary symptoms, comparatively meek and mild. The patient is almost never overwhelmed. But the symptoms no longer are localized. Any area of the body surface may be involved.

Approximately six weeks after the initial lesion, there develops in the mouth and throat or on other mucous surfaces, small, flat ulcers. These ulcers are swarming with the germs of syphilis.

At the same time a generalized skin rash may appear. It does not itch, and causes little discomfort. The patient may have slight fever and feel run down, with poor appetite and vague digestive trouble. Often the muscles ache.

And glands in various areas of the body become slightly enlarged.

That is the second warning of syphilis. It is not dramatic enough to bring realization of the urgent need for treatment. But it is an important time for treatment in the interest of both the infected individual and those with whom he comes in contact.

Emphasis upon syphilis and the need for its eradication is extremely well timed. Valuable information concerning syphilis and its various manifestations has accumulated for several centuries. The disease has been indexed and cross-referenced so thoroughly that its every move can be anticipated, if the patient obtains proper medical advice.

And now, with development during the present century of satisfactory means of treatment, the way is cleared for a successful fight against syphilis.

That syphilis is a disease of great antiquity, many students of medical history believe. Biblical descriptions of various maladies are cited as faithful pictures of syphilis, though not under that name. And Chinese writings before the time of Christ discuss a disease which could not have been anything but syphilis, some declare.

However, the first modern appearance of syphilis occurred in 1495, during the siege of Naples by King Charles VIII of France.

Amazing deadliness was displayed by the disease at that time, at least as compared to by way in which it appears in the twentieth century. The soldiers of King Charles, and especially his Spanish soldiers, were infected in large numbers, and many died from it.

From that start syphilis spread like wildfire over all Europe, still with great virulence, causing death often within a few weeks after infection occurred.

Source of the terrible plague was a puzzle. Some blamed "humors" in the air, others said the rainy season was responsible. Still another group insisted that the sailors of Columbus brought the disease back to Europe from the New World visited in 1492.

Syphilis did not receive its name until 1530. Until that time, it was known as the great pox, less commonly as the French disease or Neapolitan disease. Whatever its name, it was a terrifying disease, and frantic search was made for proper medicines with which to combat it.

The name syphilis was given the disease by the famous poet and philosopher, Hieonymus Fracastor.

In a poem written by him in 1530, the infection and its symptoms were described with great accuracy. The poem, entitled "Syphilus sive Morbus Gallicus," recited that a shepherd, Syphilus, was stricken with the infection because he refused to pay homage to the god Apollo.

Fracastor included in his poem an account of the benefits of certain drugs in combating syphilis. Chief among them was mercury, which, incidentally, was in great popularity as an antisyphilitic for many centuries. It is still used to some extent, but has been largely supplanted by newer and more effective treatment methods.

Had syphilis continued in the terrifying manner with which it struck at Naples in 1495--practically as a new disease--and thence throughout Europe, very probably efforts to combat it would have been kept up more vigorously. However, with the passage of time, it lost much of its spectacular, prompt-deathdealing qualities. It has been suggested that each succeeding generation acquired a certain immunity to the disease, and thus lessened its early virulence.

In any event, the early methods of treatment were not to be improved upon, so far as new, more effective drugs were concerned, for several hundred years. It was not until the early 20th century that more definite advance was made against it.

Then, in 1905, the germ causing syphilis was discovered. Suspected and sought after for so many years, it was found by Fritz Schaudinn, German Biologist, in the secretion from a syphilitic sore. A pale, moving germ, corkscrew-shaped, it was named Spirocheta pallida by Schaudinn.

At almost the same time, the blood test for syphilis--the Wassermann test--was developed. Perfected by August Paul von Wassermann, it is still in use today, with slight modification.

Next, in 1910, Paul Ehrlich, famous German scientist, gave to the world a true specific for the treatment of syphilis. That drug was salvarsan, an arsenic preparation. Arsenic was found to have great destructive power against the germ of syphilis without damaging the body. Salvarsan (or Arsphenamine) is still used in some clinics, but a preparation known as neo-salvarsan (neo-arsphenamine) which is easier to prepare for intravenous injection, has taken the lead. It and other arsenical preparations are used routinely in all treatment of syphilis.

Unfortunately, when arsphenamine was developed, it was believed that only one injection was needed to cure syphilis. Ehrlich believed that, and the medical profession accepted his conclusion. Time was to show that this was a grievous error. For the opinion of Ehrlich was accepted by the public

also, and persists even today.

Treatment of syphilis is not a one-injection matter, nor even a ten or fifteen-injection matter. A satisfactory course taken eighteen months to two years, under the careful guidance of a competent physician.

Ehrlich's contribution to the treatment of syphilis was without doubt the most important single advance against the disease since the ancients learned of the value of mercury in halting the inroads of syphilis. Preparations such as neoarsphenamine are vital factors in the present campaign against syphilis. Modern physicians use other drugs in conjunction with neoarsphenamine of course. Chief among these is bismuth.

Loss of the prominent position once held by mercury in the treatment of syphilis was due chiefly to the introduction of bismuth. This drug and one of the arsenicals form the spearhead of the Department of Health's attack on syphilis.

Use of them requires very careful supervision, and it is obvious that a patient with syphilis should not consider for a moment that self-treatment will suffice. No one but the competent physician can judge the patient's condition at any given stage of the treatment. No one but the physician should make the all-important decisions as to the need of further treatment, perhaps a change in treatment.

Of vital importance is the fact that during a course of early treatment there should be no rest periods. The patient must help the doctor if a cure is to be expected. The way in which the patient can help most is to make a firm resolve not to skip treatment and to follow through all instructions religiously.

Ravages wrought by syphilis in its later stages are being brought forcibly to public attention with the hope that there will develop a realization that syphilis must be treated properly, by a competent physician, in its early stages. Only in that way can the terrible effects it has upon its victims in later life be averted.

In the tertiary stage of syphilis, the vital organs carry the brunt of the attack. It will be recalled that signs of the primary and secondary stages were chiefly external, in large part limited to the skin. But in the tertiary stage the germs of syphilis may also become deeply entrenched in the heart, the liver, the blood vessels, and the brain.

Of course, the vital organs are visited early in a syphilitic infection, but prompt treatment prevents the germs from setting up permanent residence there. However, after they have grown and multiplied for ten or fifteen years in the heart muscle, for example, much permanent damage has been done.

Always the reaction of body tissue to the presence of syphilis germs is to produce fibrous tissue-scar tissue. When scar tissue forms in the heart muscle, naturally the efficiency of the heart is cut down. The muscle that is hampered by scar tissue must work harder. And inevitably the life expectancy of such a heart is reduced.

Similar reactions take place in other vital organs. They wear out sooner--and then the signs of syphilis begin to disturb the patient, send him to his physician.

Further damage can probably be averted. But damage already done cannot be repaired. That is the tragedy of tertiary syphilis. And that is the reason the person with early syphilis must not take the disease too lightly. He must look ahead twenty-years--and take proper treatment at once.

Most amazing of all present-day knowledge regarding syphilis, is that which has developed in regard to congenital syphilis.

That term is applied to syphilis transmitted to the infant by its mother before birth. It has been known for some time, of course, that under conditions syphilis presents a somewhat different picture.

It must be remembered that when congenital syphilis is present one does not see the disease in its early stages.

The child so infected is born with what corresponds to the secondary symptoms, or perhaps even later complications. Classical descriptions of such children born into this world with bodies swarming with germs of syphilis, have likened their appearance to that of a wizened old man with the sniffles. Their skin in puckered, and often large areas of it peel away. Handicapped as they are, such children usually die in the early months of life.

There is not always the picture of congenital syphilis. In those children who are not born as "wizened old men" with the florid symptoms of syphilis, there may be no manifestations of the disease until the age of six or seven, perhaps even not until adolescence. Though the blow may be delayed that long, it usually is delivered with crushing violence. Such children usually fail to continue mental and physical development, and ultimately become burdens upon society. In some cases, only the special senses may be affected, and deafness or blindness develops.

And while we must realize the damage wrought by syphilis on the infant, it must not be forgotten that the disease is an important cause of death before the child is born, or stillbirth.

This gloomy picture can be changed to one of brightest hues by one thing--treatment of the expectant mother.

Careful studies of the newer method of treating congenital syphilis -- preventive treatment would be a better term--have shown its amazing effectiveness.

According to recent surveys, an expectant mother who has syphilis has only one chance in six of giving birth to a normal, fully-developed child which presents no signs of syphilis. But if such a woman receives proper treatment for her infection she has close to 100 per cent chance of bringing into the world a child which will never show the slightest taint of syphilis, a child which can become a valuable member of the community rather than a burden upon society.

That fact alone is sufficient reason for emphasizing the urgency of proper treatment of every expectant mother who is infected with syphilis. An added advantage, of course, is the fact that two lives are being guarded by such treatment, since the mother herself is being helped along the road of recovery from her infection.

In such cases, proper treatment means, as is always the case with syphilis, early treatment. Treatment after the fifth month of expectancy greatly reduces the chance of the infant escaping syphilis. Physicians feel that action should be taken as early as possible. However, treatment in the later months is better than no treatment at all.

Most hospital clinics, most specialists and most general practitioners now make the blood test for syphilis early in pregnancy, for forewarned is forearmed.

While syphilis infection is customarily divided into three stages, some authorities describe a fourth stage.

From the aspects of public health work, which is founded upon the principle of checking a disease at its source -- in other words, treating the carriers of an infection--this fourth stage is relatively unimportant. For by the time the victim of syphilis has reached that stage, which has the explanatory title of neurosyphilis, or syphilis of the central nervous system, there is very little likelihood of any other person being infected by that patient.

Syphilis has "burrowed in," so to speak. It does not manifest itself in the open sores found in the primary and secondary stages. In rare instances there may occur what are known as relapsing secondary lesions. Then, with open sores once more, the patient is a definite public health menace.

Another peculiarity of the syphilis germ is demonstrated in the fourth stage of the disease. For not all of those persons infected with syphilis and untreated will ever develop symptoms of central nervous system involvement. The late stages of the disease may be concentrated in other vital organs.

Those who do suffer nervous system invasion deserve all our sympathy. It is they who help fill our hospitals for the insane. And all because they failed to take proper treatment at a time when the infection could have been halted, even wiped out.

Emphasis upon the cost of a disease in terms of public funds or personal budgets invariably stimulates a prompt demand for corrective action.

And when it can be shown that such cost can be greatly reduced and future costs prevented by the expenditure of relatively small sums, then the demand for action will become even more urgent.

Such a situation exists in the case of syphilis. For years it has imposed a tremendous economic burden upon the public. Facts and figures regarding this burden have not been generally known until very recent years. But now, with the light of publicity turned upon syphilis, the nation is beginning to discover what a highwayman--as well as murderer--that disease has been.

Syphilis is not just an occasional disease, trailing along in the tag-end of the procession. On the contrary, it marches at the front, with a record of being twice as prevalent as tuberculosis, four times as common as diphtheria, smallpox, typhoid fever and infantile paralysis combined.

Admittedly, syphilis is not a disabling disease in its early stages. It is unfortunate that such is the case--and especially unfortunate so far as public health aims are concerned--for an individual seriously ill would be more prompt to seek medical attention.

Syphilis takes its greatest tribute from the public purse and the pockets of private citizens in the middle span of life, the most productive period. Then syphilis, perhaps laughed at or ignored at the time of original infection, shows its hand.

All its cards are trumps, its relentless grasp takes all the stakes. For the individual stricken down, there is no future. Gainful activities are greatly restricted or stopped entirely. The victim must depend upon what may have been saved, or other incomes in the family must be drawn upon. With all funds exhausted, the only thing left is a State or municipal hospital, supported by the public.

There we have the expense account of syphilis, a drain upon family resources, then a tapping of the public till.

Other data have been accumulated relative to the cost of syphilis. For example, recently it was estimated that 40,000 persons die every year in the United States from syphilis of the heart and blood vessels. With each death representing a loss of approximately twenty years of life, the nation is robbed each year of productive efforts that

could reasonably be expected of 800,000 years of life.

Another important factor is syphilis of the brain and spinal cord. Recorded deaths--probably a great deal below the actual total--from syphilis of the brain are put at 4500 a year; from syphilis of the spinal cord, 1100 a year. Fewer years of life are anticipated by the time this form of syphilis develops, but even so it is estimated that these two forms of the disease cheat Americans of 100,000 life years annually.

And even yet we have not considered the cost to families and States in the thousands of cases where death may not occur for many years. Some idea of that is given with the revelation that an average of 18,700 cases of syphilis of the brain are under treatment every year in mental institutions throughout the United States.

That at least an equal number are cared for in private homes is not improbable. And in all such cases the loss is a double one in inability to perform gainful work combined with the cost of support and medical care.

Based as is the Pennsylvania Department of Health's syphilis campaign upon entirely practical aspects of the disease, it would seem that there can be nothing but success for it. It is concentrated upon early syphilis. At that stage of the infection, hope of cure is greatest if proper treatment is carried out. And, at the time, the spread of syphilis is

cut off, the patient is not a menace to others in his community.

Development of this plan has resulted in expansion of the State clinic system. State laboratory service is provided for examination of blood and "darkfield" specimens for indigent patients.

Wide distribution of drugs for treatment of syphilis has been provided, so that now there is now a private physician, not a clinic in the State but can obtain these drugs.

The need for a method of reporting syphilis has been met. Finally, a means of following up delinquent patients and returning them to treatment is in operation.

Pennsylvania has worked long and hard. Now it should reap the fruits of its efforts!

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